# Washington State Specific Objectives for Intermediate Life Support and Airway Technician


**OFFICE OF EMERGENCY MEDICAL AND TRAUMA PREVENTION**

**April 2000**

# The Washington State EMT-Intermediate Program Intent:

The purpose of the intermediate life support level of training and certification is to provide specific, limited life-saving skills to rural areas that cannot yet make the commitment to develop or maintain full paramedic service. This level is not to substitute for paramedics in existing services, diminishing the level of existing care. Approval of ILS course and certification of personnel shall be based on the Regional EMS/TC Plan, and shall result in an improved level of care. For any patient requiring care beyond the BLS level, it is also intended that when paramedic service is available, ILS personnel shall contact medical control for advice about rendezvous with paramedics as soon as possible.

## Intermediate Life Support & Airway Technician Definitions:

"ILS" means intermediate life support.

"Intermediate life support (ILS) and Airway Technician" means a person who:

(a) Has been trained in an approved program to perform specific phases of advanced cardiac and trauma life support, and endotracheal airway management and other authorized aids to ventilation under written or oral direction of an MPD or approved physician delegate

(b) Has been examined and certified as an ILS and Airway Technician by the Department or by the University of Washington's school of medicine.

## Intermediate Life Support & Airway Technician Course Content:

The Department recognizes the United States Department of Transportation National Standard EMT Intermediate training course curriculum as amended by the Department. Training for the following certification levels are contained in this curriculum. **Specific lessons needed to meet the training requirements for each level are contained on the following pages**. The specific objectives needed to meet the training requirements for each lesson are contained in the following Appendix E, which was extracted from the curriculum.

- ILS and Airway Tech: Those parts of the Emergency Medical Technician -- Intermediate course which relate to IV therapy and intraosseous infusion (including saline locks), the use of multi-lumen airway adjuncts and endotracheal tubes, chest decompression, and the following medications:
  - Albuterol administered by inhalation;
  - Aspirin PO (oral), for suspected myocardial infarction.
  - Dextrose 50% and 25%;
  - Epinephrine for anaphylaxis administered by a commercially pre-loaded measured-dose device;
  - Naloxone.
  - Naloxone.
  - Nitroglycerin, sublingual and/or spray;

# Required Instruction for Reciprocal Certification as an Intermediate Life Support and Airway Technician in Washington State

**The following section contains specific objectives for each of the lessons listed below as "required" from the EMT-Intermediate curriculum. This curriculum may be obtained as a resource from the Office of Emergency Medical and Trauma Prevention web site shown below.**

**http://www.doh.wa.gov/hsqa/emstrauma/publications.htm**

Please review the objectives in each of the "required" lessons below. If you determine additional study or instruction is necessary to meet these training requirements, complete the following steps:

1. Study educational material pertinent to the objectives you must meet using the EMT-Intermediate curriculum from the web address shown above and paramedic or intermediate textbooks, or, receive training from a paramedic or content area expert in those topic areas. If you do not personally have access to the Internet, most local libraries have access. The trauma triage tool and EMS-NO CPR information is available in the curriculum and individually on the web site.
2. When you have completed the necessary Washington State Specific Objectives (WSSOs) and feel comfortable that you are knowledgeable in these objectives, complete and sign the attached WSSO Affirmation Statement.
3. Return the WSSO Affirmation Statement with your other documentation to the address provided on the application. After eligibility is determined you may be approved to take the written examination.

## Required Lessons

| Section 1 – Preparatory |
|---|
| Lesson 1-1: EMT-I Roles & Responsibilities |
| Lesson 1-2: Med./Legal/ Ethics |
| Lesson 1-3: Documentation |
| **Section 2 – Essentials** |
| Lesson 2-1: Human Systems |
| Lesson 2-2: Patient Assessment |
| Lesson 2-3: Clinical Decision Making |
| Lesson 2-5: Airway Management & Ventilation |
| Lesson 2-6: Assessment and Management of Shock |
| Lesson 2-7: IV & IO Infusion |
| **Section 3 – Pharmacology and Emergency Care** |
| Lesson 3-1: Pharmacology and Medication Administration |
| Lesson 3-2: Cardiology |
| Lesson 3-3: Medical |
| **Section 4 – Special Considerations** |
| Lesson 4-1: Pediatrics |
| Lesson 4-2: Geriatrics |

## Lab Proficiency Required

- IO line placement
- Multi-Lumen-Airways
- Medication Administration

## Clinical/Field Internship Requirements

Documented proof of:

- 10 IV insertions on Humans
- 10 ET intubations on Humans

# WASHINGTON STATE SPECIFIC OBJECTIVES AFFIRMATION STATEMENT

Before your EMS training can be approved, you must affirm that you understand the *Washington State specific Objectives* for the level of certification you are applying for. This is ***required*** knowledge for all certification candidates, and contains specific objectives that establish the standard for field performance in Washington State. Questions regarding these objectives are included in the written examination.

**I understand that this information is vital to my ability to safely provide patient care in Washington State, and declare that I am knowledgeable in the Washington State specific Objectives for:**

**(Please circle one only)**

| | | |
|---|---|---|
| FIRST RESPONDER | EMT | IV THERAPY TECHNICIAN |
| AIRWAY TECHNICIAN | IV/AIRWAY TECHNICIAN | ILS TECHNICIAN |
| ILS/AIRWAY TECHNICIAN | PARAMEDIC | |

_____ _____

**Print Name** **Date**

_____

**Applicant Signature**

Revised 1//2006

# Specific Lesson Objectives

## Section 1 - **Preparatory**

## Lesson 1-1**: Roles and Responsibilities of the EMT Intermediate**

### TERMINAL INSTRUCTIONAL OBJECTIVE

At the completion of this lesson, the EMT-Intermediate will understand his or her roles and responsibilities within an EMS system, and how these roles and responsibilities differ from other levels of providers.

Integrate the principles of the Washington State Trauma Triage Procedures into trauma response situations.

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Intermediate student will be able to:

1. Define the following terms: (C-1)
    - Medical direction
    - Medical Control
    - Protocols
    - Patient Care Procedures
    - Trauma Triage Tool
2. Describe the recognized levels of EMS training/education, leading to licensure/certification in his or her state. (C-1)
3. Explain EMT-Intermediate recertification requirements in Washington state [Provide Student Handout on recertification in Washington state . (C-1)
4. Review examples of local protocols. (C-1)
5. Discuss prehospital care as an extension of the physician. (C-1)
6. Describe the relationship between ALS on the scene, the EMT-Intermediate on the scene, and the EMS physician providing on-line medical direction/control (C-1)
7. Discuss the Washington State Trauma Triage Tool and how it is used to direct trauma patient. (C-1)
8. Understand the purpose of the Washington State Trauma Triage Tool. (C-1)
9. Understand who developed and approved the Washington State Trauma Triage Tool. (C-1)
10. Understand the components of the Washington State Trauma Triage Tool. (C-1)
11. Understand regional patient care procedures. (C-1)
12. Understand how to use the Washington State Trauma Triage Tool according to the regional approved Patient Care Procedures. (C-1)
13. Understand the difference between Regional Patient Care Procedures and Medical Program Director approved Patient Care Protocols. (C-1)
14. Understand the purpose of trauma wristbands. (C-1)

**Lesson 1-2:** Medical/Legal Issues and Ethics

**TERMINAL INSTRUCTIONAL OBJECTIVE**

At the completion of this lesson, the EMT-Intermediate will understand the legal and ethical issues that impact the decisions made in the out-of-hospital environment

**MEDICAL LEGAL**

**COGNITIVE OBJECTIVES**

At the completion of this lesson, the EMT-Intermediate student will be able to:

1. Differentiate between the scope of practice and the standard of care for EMT-Intermediate practice (C-3)
2. Define and describe what constitutes abandonment. (C-1)
3. Define and describe what constitutes Assault. (C-1)
4. Define and describe what constitutes Battery. (C-1)
5. Define and describe what constitutes Abandonment, i.e., when ILS Technician turns a patient's care over to an IV Technician. (C-1)
6. Given a scenario, describe appropriate patient management and care techniques in a refusal of care situation. (C-3)
7. Identify the legal issues involved in the decision not to transport a patient, or to reduce the level of care being provided during transportation. (C-1)
8. Discuss the responsibilities of the EMT-Intermediate relative to advanced directives/EMS No-CPR, and withholding or stopping resuscitation efforts (Refer to existing local protocols). (C-1)
9. Describe the actions that the EMT-Intermediate should take to preserve evidence at a crime or accident scene. (C-1)
10. Describe the importance of providing accurate documentation (oral and written) in substantiating an incident. (C-1)
11. Describe the characteristics of a prehospital care report required to make it an effective patient care record. (C-1)

## Lesson 1-3: **Documentation**

**COGNITIVE OBJECTIVES**

In order to properly document, the EMT-Intermediate shall:

1. Identify and use medical terminology correctly. (C-1)
2. Recite appropriate and accurate medical abbreviations and acronyms. (C-1)
3. Record all pertinent administrative information. (C-1)
4. Describe the information pertinent to agency reimbursement. (C-1)
5. Analyze the documentation for accuracy and completeness, including spelling. (C-3)
6. Identify and eliminate extraneous or nonprofessional information. (C-1)
7. Describe the differences between subjective and objective elements of documentation. (C-1)
8. Evaluate a finished document for errors and omissions. (C-3)
9. Evaluate a finished document for proper use and spelling of abbreviations and acronyms. (C-3)
10. Advocate the confidential nature of an EMS report. (C-1)
11. Describe the potential consequences of poor documentation. (C-1)

12. Describe the special considerations concerning patient refusal of transport. (C-1)
13. Describe the special considerations concerning mass casualty incident documentation. (C-1)
14. Apply the principles of documentation to computer charting, as this technology becomes available. (C-3)
15. Identify the pertinent, reportable clinical data of each patient interaction. (C-1)
16. Record the pertinent reportable clinical data appropriately. (C-1)
17. Note and record “pertinent negative” clinical findings. (C-1)

## Section 2 - **Essentials**

## Lesson 2-1: **Overview of Human Systems**

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT Intermediate student will be able to use the principles of anatomy and physiology as a foundation for the clinical practice of out of hospital emergency medicine.

### Organization and General Plan of the Body

1. Review the definition of anatomy & physiology. (C-1)
2. Define homeostasis, and use an example to explain. (C-1)
3. Review and state the anatomical terms for the parts of the body. (C-1)
4. Use proper terminology to describe the location of body parts with respect to one another. (C-1)
5. Name the body cavities, their membranes, and some organs within each cavity. (C-1)
6. Explain how and why the abdomen is divided into smaller areas. Be able to name organs in these areas. (C-1)

### Tissues and Membranes

7. Describe the general characteristics of each of the four major categories of tissues. (C-1)
8. Describe the functions of the types of epithelial tissues with respect to the organs in which they are found. (C-1)
9. Describe the functions of the connective tissues, and relate them to the functioning of the body or a specific organ system. (C-1)
10. Explain the differences, in terms of location and function, among skeletal muscle, smooth muscle, and cardiac muscle. (C-1)
11. Name some membranes made of connective tissue. (C-1)

### The Integumentary System

12. Name the two major layers of the skin and the tissue of which each is made. (C-1)
13. Describe how the arterioles in the dermis respond to heat, cold, and stress. (C-1)
14. Name the tissues that make up the subcutaneous tissue, and describe their functions. (C-1)

### The Skeletal System

15. Describe the functions of the skeleton
16. Explain how bones are classified, and give an example of each type. (C-1)
17. Name the major bones of the human skeleton (Be able to point to each on diagrams, skeleton models, or yourself). (C-1)

18. Describe the functions of the skull, vertebral column, rib cage, scapula, and pelvic bone. (C-1)
19. Explain how joints are classified. For each type, give an example, and describe the movement possible. (C-1)

**The Muscular System**

20. Describe muscle structure in terms of muscle cells, tendons, and bones. (C-1)
21. Describe the structure and function of the muscle system and identify three types of muscle. (C-1)
22. Learn the major muscles of the body and their functions. (C-1)

**The Nervous System**

23. Name the divisions of the nervous system and the parts of each, and state the general functions of the nervous system. (C-1)
24. State the functions of the parts of the brain; be able to locate each part on a diagram. (C-1)
25. Name the meninges and describe their locations. (C-1)
26. State the locations and functions of cerebrospinal fluid. (C-1)
27. Explain how the sympathetic division of the autonomic nervous system enables the body to adapt to a stress situation. (C-1)
28. Explain how the parasympathetic division of the autonomic nervous system promotes normal body functioning in relaxed situations. (C-1)

**The Senses**

29. Explain the general purpose of sensations. (C-1)
30. Describe the characteristics of sensations. (C-1)
31. Explain referred pain and its importance. (C-1)
32. Explain the importance of baroreceptor. (C-1)

**Blood**

33. Describe the composition and explain the functions of blood plasma. (C-1)
34. State the function of red blood cells, including the protein and the mineral involved. (C-1)
35. State what platelets are, and explain how they are involved in hemostasis. (C-1)

**The Heart**

36. Describe the location of the heart and the pericardial membranes. (C-1)
37. Name the chambers of the heart and the vessels that enter or leave each. (C-1)
38. Name the valves of the heart, and explain their functions. (C-1)
39. Describe coronary circulation, and explain its purpose. (C-1)
40. Describe the cardiac cycle. (C-1)
41. Explain stroke volume, cardiac output. (C-3)

**The Vascular System**

42. Describe the structure of arteries and veins, and relate their structure to function. (C-1)
43. Describe the structure of capillaries, and explain the exchange processes that take place in capillaries. (C-1)
44. Describe the pathway and purpose of pulmonary circulation. (C-1)
45. Name the branches of the aorta and their distributions. (C-1)
46. Name the major systemic veins, and the parts of the body they drain of blood. (C-1)

47. Describe the modifications of fetal circulation, and explain the purpose of each. (C-1)
48. Define blood pressure. (C-1)
49. Explain how the heart and kidneys are involved in the regulation of blood pressure. (C-3)

**The Respiratory System**

50. State the general function of the respiratory system. (C-1)
51. Describe the structure and functions of the nasal cavities and pharynx. (C-1)
52. Describe the structure of the larynx and explain the speaking mechanism. (C-1)
53. Describe the structure and functions of the trachea and bronchial tree. (C-1)
54. State the locations of the pleural membranes, and explain the functions of serous fluid. (C-1)
55. Describe the structure of the alveoli and pulmonary capillaries, and explain the importance of surfactant. (C-1)
56. Name and describe the important air pressures involved in breathing. (C-1)
57. Describe normal inhalation and exhalation and forced exhalation. (C-1)
58. Explain the diffusion of gases in external respiration and internal respiration. (C-1)
59. Describe how oxygen and carbon dioxide are transported in the blood. (C-1)
60. Name the pulmonary volumes and define each. (C-1)

**The Digestive System**

61. Describe the general functions of the digestive system, and name its major divisions. (C-1)
62. Describe the structure and functions of the teeth and tongue. (C-1)
63. Describe the location and function of the pharynx and esophagus. (C-1)
64. Describe the location, structure, and function of the stomach, liver, gallbladder, pancreas, and small intestine. (C-1)
65. Describe the location and functions of the large intestine. (C-1)
66. Describe the functions of the liver. (C-1)

**The Urinary System**

67. Describe the location and general function of each organ of the urinary system. (C-1)
68. State the general function of the urinary system. (C-1)

**Fluid-Electrolyte and Acid-Base Balance**

69. Describe the water compartments and the name for the water in each. (C-1)
70. Explain how water moves between compartments. (C-1)
71. Explain the regulation of the intake and output of water. (C-1)
72. Describe the effects of acidosis and alkalosis. (C-1)

## Lesson 2-2: **Patient Assessment**

## Topic - History Taking

### COGNITIVE OBJECTIVES

At the completion of this topic, the EMT-Intermediate student will be able to:

1. Describe the techniques of history taking. (C-1)
2. Describe techniques of establishing a rapport with the patient. (C-1)
3. Describe the importance of using good listening skills during the interview process. (C-1)
4. Describe the use of body language and touch for a means of communication. (C-1)

5. Describe methods to manage communication barriers. (C-1)
6. Describe open-ended questions. (C-1)
7. Describe direct questions. (C-1)
8. Differentiate between the use of open-ended and direct questions in patient interviewing. (C-3)
9. Describe the components of a S.A.M.P.L.E. patient history. (C-1)
10. Describe history-taking techniques when dealing with sensitive topics. (C-1)
11. Describe special challenges to history taking. (C-1)
    - Silence
    - Over talkative patients
    - Patients with multiple symptoms
    - Anxious patients
    - Reassurance
    - Anger and hostility
    - Intoxication
    - Crying
    - Depression
    - Sexually attractive or seductive patients
    - Confusing Behaviors or Histories
    - Limited communication skills
    - Talking with family and friends
12. Describe why patience and repetition may be necessary while taking a patient S.A.M.P.L.E. history. (C-1)

## Topic - Techniques of Physical Examination

### TOPIC TERMINAL OBJECTIVE

At the end of this topic, the EMT-Intermediate student will be able to explain the clinical significance of physical exam findings.

### COGNITIVE OBJECTIVES

13. Define the following terms: inspection, palpation, and auscultation. (C-1)
14. Describe the techniques of inspection, palpation, percussion, and auscultation. (C-1)
15. Evaluate the importance of a general survey. (C-3)
16. Describe the examination of skin (C-1)
17. Differentiate normal and abnormal findings of the skin assessment. (C-3)
18. Distinguish the importance of abnormal findings of the skin assessment. (C-3)
19. Describe the examination of the head and neck. (C-1)
20. Describe the normal assessment findings of the skull. (C-1)
21. Describe the assessment of temperature. (C-1)
22. Describe the examination of the eyes. (C-1)
23. Distinguish between normal and abnormal assessment findings of the eyes. (C-3)
24. Describe the examination of the ears. (C-1)
25. Describe the examination of the nose. (C-1)
26. Describe the examination of the mouth. (C-1)

27. Describe the examination of the neck. (C-1)
28. Describe the survey of the chest. (C-1)
29. Describe the examination of the posterior chest. (C-1)
30. Differentiate the characteristics of breath sounds. (C-3)
31. Describe the examination of the anterior chest. (C-1)
32. Differentiate normal and abnormal assessment findings of the chest examination. (C-3)
33. Describe the examination of the arterial pulse including rate and rhythm. (C-1)
34. Distinguish normal and abnormal findings of arterial pulse. (C-3)
35. Describe the assessment of the jugular veins. (C-1)
36. Describe special examination techniques of the cardiovascular examination. (C-1)
37. Describe the examination of the abdomen. (C-1)
38. Describe the examination of the extremities. (C-1)
39. Describe the proper sequence of physical examination. (C-1)
40. Describe the general guidelines of recording examination information. (C-1)
41. Organize the findings of a patient examination. (C-1)
42. Discuss the considerations of examination of an infant or child. (C-1)
43. Discuss the considerations of examination of a patient with special needs. (C-1)

## Topic - Patient Assessment

### TOPIC TERMINAL OBJECTIVE

At the end of this topic, the EMT-Intermediate student will be able to integrate the principles of history taking and techniques of physical exam to perform a scene size-up, initial assessment, focused history and physical exam, detailed physical exam and an ongoing assessment.

### COGNITIVE OBJECTIVES

At the completion of this topic, the EMT-Intermediate student will be able to:

44. Recognize hazards/potential hazards.(C-1)
45. Describe common hazards found at the scene of a trauma and a medical patient.(C-1)
46. Determine hazards found at the scene of a medical or trauma patient. (C-2)
47. Differentiate safe from unsafe scenes.(C-3)
48. Describe methods to making an unsafe scene safe. (C-1)
49. Discuss common mechanisms of injury/nature of illness.(C-1)
50. Predict patterns of injury based on mechanism of injury.(C-2)
51. Compare data regarding mechanism of injury to actual scenes. (C-3)
52. Discuss the reason for identifying the total number of patients at the scene.(C-1)
53. Organize the management of a scene following size-up.(C-3)
54. Explain the reason for identifying the need for additional help or assistance.(C-1)
55. Summarize the reasons for forming a general impression of the patient during the initial assessment.(C-1)
56. Discuss methods of assessing mental status.(C-1)
57. Differentiate levels of consciousness in the adult, infant and child. (C-3)
58. Differentiate between assessing the altered mental status in the adult, child and infant patient.(C-3)
59. Discuss methods of assessing the airway in the adult, child and infant patient.(C-1)

60. State reasons for management of the cervical spine once the patient has been determined to be a trauma patient.(C-1)
61. Analyze a scene to determine if spinal precautions are required. (C-3)
62. Describe methods used for assessing if a patient is breathing.(C-1)
63. Differentiate between a patient with adequate and inadequate minute ventilation. (C-3)
64. Distinguish between methods of assessing breathing in the adult, child and infant patient.(C-3)
65. Compare the methods of providing airway care to the adult, child and infant patient.(C-3)
66. Describe the methods used to obtain a pulse.(C-1)
67. Differentiate between obtaining a pulse in an adult, child and infant patient.(C-3)
68. Discuss the need for assessing the patient for external bleeding.(C-1)
69. Describe normal and abnormal findings when assessing skin color.(C-1)
70. Describe normal and abnormal findings when assessing skin temperature.(C-1)
71. Describe normal and abnormal findings when assessing skin condition.(C-1)
72. Describe normal and abnormal findings when assessing skin capillary refill in the infant and child patient.(C-1)
73. Explain the reason for prioritizing a patient for care and transport.(C-1)
74. Differentiate patients requiring immediate transport versus those not requiring immediate transport. (C-3)
75. Describe the evaluation of patient's perfusion status based on findings in the initial assessment. (C-1)
76. Determine a patient's pulse pressure and relate it to the patient's perfusion status. (C-1)
77. Describe orthostatic vital signs and evaluate their usefulness in assessing a patient in shock. (C-1)
78. Compare and contrast the relative advantages and disadvantages of capillary refill. (C-3)
79. Apply the techniques of physical examination to the medical patient. (C-1)
80. Describe the unique needs for assessing an individual with a specific chief complaint with no known prior history.(C-1)
81. Differentiate between the history and physical exam that is performed for responsive patients with no known prior history and patients responsive with a known prior history.(C-3)
82. Describe the unique needs for assessing an individual who is unresponsive or has an altered mental status.(C-1)
83. Differentiate between the assessment that is performed for a patient who is unresponsive or has an altered mental status and other medical patients requiring assessment.(C-3)
84. Discuss the reasons for reconsidering the mechanism of injury.(C-1)
85. Define and state the reasons for performing a rapid trauma assessment.(C-1)
86. Recite examples and explain why patients should receive a rapid trauma assessment.(C-1)
87. Apply the techniques of physical examination to the trauma patient. (C-1)
88. Describe the areas included in the rapid trauma assessment and discuss what should be evaluated.(C-1)

89. Differentiate cases when the rapid assessment may be altered in order to provide patient care.(C-3)
90. Discuss the reason for performing a focused history and physical exam.(C-1)
91. Describe when and why a detailed physical examination is necessary. (C-1)
92. Discuss the components of the detailed physical exam in relation, to the techniques of examination.(C-1)
93. State the areas of the body that are evaluated during the detailed physical exam.(C-1)
94. Explain what additional care should be provided while performing the detailed physical exam.(C-1)
95. Distinguish between the detailed physical exam that is performed on a trauma patient and that of the medical patient.(C-3)
96. Differentiate patients requiring a detailed physical exam from those who do not. (C-3)
97. Discuss the reasons for repeating the initial assessment as part of the on-going assessment.(C-1)
98. Describe the components of the on-going assessment.(C-1)
99. Describe trending of assessment components.(C-1)

## Lesson 2-3: **Clinical Decision Making**

**COGNITIVE OBJECTIVES**

At the completion of this topic, the EMT-Intermediate student will be able to:

1. Explain and demonstrate critical thinking skills(C-1, C-3)
2. Explain and demonstrate decision making skills(C-1, C-3)
3. Explain and demonstrate assessment Based Patient Care(C-1, C-3)

## Lesson 2-5: **Airway Management & Ventilation for Airway Technicians or ILS and Airway Technicians Only**

**LESSON TERMINAL OBJECTIVE:**

At the end of this lesson, the EMT-Intermediate student will be able to utilize the assessment findings to formulate a field impression and implement the management plan for the patient experiencing an airway or breathing emergency.

**COGNITIVE OBJECTIVES:**

At the completion of this lesson, the EMT-Intermediate student will be able to:

1. Identify the anatomy of the upper and lower airway. (C-1)
2. Describe the functions of the upper and lower airway. (C-1)
3. Explain the differences in the anatomy of the upper and lower airway between an adult and a pediatric patient. (C-1)
4. Define gag reflex. (C-1)
5. Establish the relationship between pulmonary circulation and respiration. (C-3)
6. Define partial pressures and list the concentration of gases, which comprise atmospheric air. (C-1)
7. Describe the measurement of oxygen in the blood. (C-1)
8. Describe the measurement of carbon dioxide in the blood. (C-1)
9. List factors, which cause decreased oxygen concentrations in the blood. (C-1)

10. Define atelectasis. (C-1)
11. Define:
    - Hypoxia. (C-1)
    - Hypoxemia. (C-1)
12. List the factors, which increase carbon dioxide production in the body. (C-1)
13. List the factors, which decrease carbon dioxide elimination in the body. (C-1)
14. Describe the voluntary regulation of respiration. (C-1)
15. Describe the involuntary regulation of respiration. (C-1)
16. Describe the modified forms of respiration. (C-1)
17. Define normal respiratory rates for the adult, child, and infant. (C-1)
18. List the factors, which affect respiratory rate. (C-1)
19. List the factors, which affect respiratory depth. (C-1)
20. Define the normal tidal volumes for the adult, child, and infant. (C-1)
21. Explain the risk of infection to EMS providers associated with basic airway and advanced airway management. (C-1, C-3)
22. Explain the risk of infection to EMS providers associated with ventilation. (C-1, C-3)
23. Define pulsus paradoxes. (C-1)
24. Define partial airway obstruction: (C-1)
    - With good air exchange.
    - With poor air exchange.
25. Define complete airway obstruction. (C-1)
26. Review causes of upper airway obstruction, including: (C-1)
    - The tongue
    - Foreign body aspiration
    - Laryngeal spasm
    - Laryngeal edema
    - Trauma
27. Review causes of respiratory distress, including: (C-1)
    - Upper and lower airway obstruction
    - Inadequate ventilation
    - Impairment of the respiratory muscles
    - Impairment of the nervous system
28. Review and describe manual airway maneuvers, including: (C-1)
    - Opening the mouth
    - Head-tilt/chin-lift maneuver
    - Jaw-thrust maneuver
    - Modified jaw-thrust maneuver
29. Describe the Sellick's (cricoid pressure) maneuver (C-1)
30. Review and describe complete airway obstruction maneuvers, including: (C-1)
    - The Heimlich maneuver
    - Finger sweep
    - Chest thrusts

- Removal with Magill Forceps

31. Review the purpose for suctioning the upper airway. (C-1)
32. Review types of suction equipment, including: (C-1)
    - Hand-powered suction devices
    - Oxygen-powered portable suction devices
    - Battery-operated portable suction devices
    - Mounted vacuum-powered suction devices
33. Review types of suction catheters, including: (C-1)
    - Hard or rigid catheters
    - Soft catheters
34. Review techniques of suctioning the upper airway. (C-1)
35. Review special considerations of suctioning the upper airway. (C-1)
36. Describe the indications for suctioning the upper airway. (C-3)
37. Identify techniques of tracheobronchial suctioning in the intubated patient. (C-1)
38. Identify special considerations of tracheobronchial suctioning in the intubated patient. (C-1)
39. Describe indications for tracheobronchial suctioning in the intubated patient. (C-3)
40. Identify gastric distention. (C-1)
41. Describe indications for gastric decompression. (C-1)
42. Identify techniques of gastric decompression. (C-1)
43. Identify special considerations of gastric decompression. (C-1)
44. Describe indications and contraindications for inserting an airway adjunct, including: (C-1)
    - An oropharyngeal airway
    - A nasopharyngeal airway
45. Review the steps to insert an oropharyngeal airway. (C-1)
46. Review the steps to insert a nasopharyngeal airway. (C-1)
47. Review methods to perform ventilation, including: (C-1)
    - Mouth-to-mouth
    - Mouth-to-nose
    - Mouth-to-mask
    - 1 person bag-valve-mask
    - 2 person bag-valve-mask
    - Flow-restricted oxygen-powered ventilation device
48. Review the method of mouth-to-mouth ventilation. (C-1)
49. Review the steps of mouth-to-nose ventilation. (C-1)
50. Review the steps of mouth-to-mask method to perform ventilation. (C-1)
51. Review the ventilator mask. (C-1)
52. Review the steps to perform mouth-to-mask ventilation. (C-1)
53. Review complications of mouth-to-mask ventilation. (C-1)
54. Review methods to perform ventilation with the bag-valve-mask, including: (C-1)
    - 1 person method
    - 2 person method

55. Review the advantage of the 2 person method to perform ventilation with the bag-valve-mask. (C-1)
56. Review the bag-valve-mask used to perform ventilation. (C-1)
57. Review the steps to perform ventilation with a bag-valve-mask, including: (C-1)
    - 1 person method
    - 2 person method
58. Review and describe complications of ventilation with a bag-valve-mask. (C-1)
59. Identify the flow-restricted oxygen-powered ventilation device. (C-1)
60. List the steps to perform ventilation with the flow-restricted oxygen-powered ventilation device (C-1)
61. Describe complications of ventilation with the flow-restricted oxygen-powered ventilation device. (C-1)
62. Identify the automatic transport ventilator (ATV). (C-1)
63. List the steps to perform ventilation with the ATV. (C-1)
64. Describe complications of ventilation with the ATV. (C-1)
65. Explain safety considerations of oxygen storage and delivery. (C-1)
66. Identify types of oxygen cylinders. (C-1)
67. Identify types of pressure regulators, including: (C-1)
    - High-pressure regulator
    - Therapy regulator
68. List the steps for delivering oxygen from a cylinder and regulator. (C-1)
69. Identify an oxygen humidifier. (C-1)
70. Identify oxygen delivery equipment, liter flow range, and concentration of delivered oxygen, including: (C-1)
    - Nasal cannula
    - Simple face mask
    - Partial rebreather mask
    - Nonrebreather mask
    - Venturi mask
    - Small volume nebulizer
71. Identify a stoma. (C-1)
72. Define laryngectomy. (C-1)
73. Identify a tracheostomy. (C-1)
74. Identify a tracheostomy tube. (C-1)
75. Describe mouth-to-stoma ventilation. (C-1)
76. Describe bag-valve-mask-to-stoma ventilation. (C-1)
77. Describe stoma suctioning. (C-1)
78. Identify special considerations in airway management and ventilation for the pediatric patient. (C-1)
79. Identify special considerations in airway management and ventilation for patients with facial injuries. (C-1)
80. Describe laryngoscopy for foreign body airway obstruction. (C-1)
81. Identify equipment used to retrieve foreign bodies from the upper airway. (C-1)

82. Describe indications to perform advanced airway management. (C-1)
83. Differentiate endotracheal intubation from other methods of advanced airway management. (C-3)
84. Describe endotracheal intubation. (C-1)
85. Identify indications for endotracheal intubation. (C-1)
86. Identify contraindications for endotracheal intubation. (C-1)
87. Describe general precautions for endotracheal intubation. (C-1)
88. Describe cricoid pressure. (C-1)
89. Describe complications of endotracheal intubation. (C-1)
90. Describe methods of endotracheal intubation in the trauma patient. (C-1)
91. Describe methods of endotracheal intubation in the pediatric patient. (C-1)
92. Discuss appropriate endotracheal intubation equipment for adults, infants and children.(C-1)
93. Identify complications of improper endotracheal intubation procedure in adults, infants and children. (C-1)
94. Determine when endotracheal intubation is appropriate for a newborn. (C-1)
95. Discuss appropriate endotracheal intubation techniques for a newborn. (C-1)
96. Assess patient improvement due to endotracheal intubation. (C-3)
97. Identify complications related to endotracheal intubation for a newborn. (C-1)
98. Describe selection of a multi-lumen airway to perform ventilation. (C-1, C-3)
99. Describe indications and contraindications for inserting the multi-lumen airway. (C-1)
100. Discuss and understand the use of quantitative measurement of patient oxygenation and end-tidal $CO_2$. (C-1)
101. List the equipment used to perform insertion of the multi-lumen airway. (C-1)
102. List the steps to insert a multi-lumen airway. (C-1)
103. Describe complications of insertion of a multi-lumen airway. (C-1)
104. Describe extubation. (C-1)
105. Identify the indications for extubation. (C-1)
106. Describe the complications of extubation. (C-1)

## Lesson 2-6: **Assessment and Management of Shock**

### LESSON TERMINAL INSTRUCTIONAL OBJECTIVE

At the end of this lesson, the EMT-Intermediate student will be able to utilize the assessment findings to formulate a field impression and implement the treatment plan for the bleeding patient or the patient in shock.

### COGNITIVE OBJECTIVES

At the conclusion of this lesson, the EMT-Intermediate student will be able to:

### GENERAL

1. Describe the epidemiology, including the morbidity/mortality and prevention strategies, for shock and hemorrhage. (C-1)
2. Discuss the anatomy and physiology of the cardiovascular system. (C-1)
3. Predict shock and hemorrhage based on mechanism of injury. (C-3)
4. Discuss the various types and degrees of shock and hemorrhage. (C-1)

**PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Cardiovascular System**

5. Discuss the pathophysiology of hemorrhage and shock. (C-1)
6. Discuss the assessment findings associated with hemorrhage and shock. (C-1)
7. Identify the need for intervention and transport of the patient with hemorrhage or shock. (C-1)
8. Discuss the treatment plan and management of hemorrhage and shock. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Hemorrhage**

9. Describe the incidence, morbidity, and mortality of hemorrhage.(C-1)
10. Discuss the management of external hemorrhage.(C-1)
11. Differentiate between the administration rate and amount of IV fluid in a patient with controlled versus uncontrolled hemorrhage.(C-3)
12. Relate internal hemorrhage to the pathophysiology of compensated and uncompensated hemorrhagic shock.(C-3)
13. Relate internal hemorrhage to the assessment findings of compensated and uncompensated hemorrhagic shock.(C-3)
14. Discuss the management of internal hemorrhage.(C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Shock**

15. Describe the incidence, morbidity, and mortality of shock.(C-1)
16. Describe the body's physiologic response to changes in perfusion.(C-1)
17. Discuss the assessment findings of hemorrhagic shock.(C-1)
18. Relate pulse pressure changes to perfusion status.(C-3)
19. Relate orthostatic vital sign changes to perfusion status.(C-3)
20. Define compensated and uncompensated hemorrhagic shock.(C-1)
21. Discuss the pathophysiological changes associated with compensated shock.(C-1)
22. Discuss the assessment findings associated with compensated shock.(C-1)
23. Identify the need for intervention and transport of the patient with compensated shock.
24. Discuss the treatment plan and management of compensated shock.(C-1)
25. Discuss the pathophysiological changes associated with uncompensated shock.(C-1)
26. Discuss the assessment findings associated with uncompensated shock.(C-1)
27. Identify the need for intervention and transport of the patient with uncompensated shock.
28. Discuss the treatment plan and management of uncompensated shock.(C-1)
29. Differentiate between compensated and uncompensated shock.(C-3)
30. Relate external hemorrhage to the pathophysiology of compensated and uncompensated hemorrhagic shock.(C-3)
31. Relate external hemorrhage to the assessment findings of compensated and uncompensated hemorrhagic shock.(C-3)
32. Differentiate between the administration of fluid in the normotensive, hypotensive, and profoundly hypotensive patient.(C-3)
33. Discuss the physiologic changes associated with the pneumatic anti-shock garment (PASG).(C-1)
34. Discuss the indications and contraindications for the application and inflation of the PASG.(C-1)

## Lesson 2-7: **Intravenous & Intraosseous Line Placement and Infusion**

**COGNITIVE OBJECTIVES:**

At the end of this lesson, the student will be able to:

1. Define the term intravenous cannulation. (C-1)
2. Describe universal precautions and body substance isolation (BSI) procedures when performing an intravenous cannulation. (C-1)
3. Discuss medical asepsis. (C-1)
4. Differentiate among the different solutions and intravenous cannulation devices used when administering intravenous cannulations for the management of trauma and medical emergencies. (C-3)
5. Identify anatomic landmarks utilized in administering intravenous cannulations. (C-1)
6. Correctly locate three appropriate sites for intraosseous needle insertion. (C-1)
7. Describe the equipment needed, indications, contraindications, complications, and procedures for the preparation and administration of intravenous cannulations, including saline locks. (C-1)
8. Identify the equipment needed and procedures used for discontinuing an intravenous cannulation. (C-1)
9. Describe the procedures, the preparation and administration of a fluid challenge.(C-1)
10. Describe on-line and off-line medical direction/control for intravenous cannulation. (C-1)
11. State the indications and contraindications for insertion of an intraosseous line. (C-1)
12. List the necessary equipment for an intraosseous insertion. (C-1)
13. Describe the steps required for intraosseous needle insertion and confirmation of correct placement. (C-1)
14. Describe the process of securing the intraosseous needle. (C-1)
15. Compare the rate of fluid infusion through a peripheral line versus an intraosseous line, and describe methods of increasing the rate of infusion through an intraosseous line. (C-1)
16. Describe the concept of fluid limitation in patients under 100 pounds. (C-1)
17. State the potential complications of intraosseous needle insertion and infusion. (C-1)
18. Differentiate among the different techniques for obtaining a blood sample. (C-3)
19. Identify locations utilized in obtaining a blood sample. (C-1)
20. Describe the equipment needed, techniques utilized, complications, and general principles for obtaining a blood sample. (C-1)
21. Describe and understand the use and testing of blood glucose monitoring devices. (C-1)
22. Describe disposal of contaminated items and sharps. (C-1)

# Section 3 - **Pharmacology and Emergency Care**

## Lesson 3-1: **Pharmacology of Emergency ILS Medications**

**COGNITIVE OBJECTIVES**

1. Discuss the EMT-Intermediate's responsibilities and scope of management pertinent to the administration of medications, and understand the physiological effects of narcotics. (C-1)
2. List and differentiate among routes of drug administration. (C-3)

3. Describe mechanisms of drug action. (C-1)
4. Describe factors altering drug responses, predictable drug responses, drug responses unintentionally producing adverse effects (iatrogenic drug responses), and unpredictable adverse drug responses pertinent to ILS Medications. (C-1)
5. Differentiate among drug interactions. (C-3)
6. Discuss considerations for storing drugs pertinent to ILS medications. (C-1)
7. List and describe drugs, which the ILS Technician or ILS/Airway Technician may carry on an ambulance or aid vehicle, and administer according to Washington Administrative code and local MPD protocol. (C-1)
    - Epinephrine 1:1000 for anaphylaxis, administered by a commercially pre-loaded measured dose device:
        - Classification
        - Mechanisms of action
        - Indications
        - Pharmacokinetics
        - Side/adverse effects
        - How supplied/Dosages
        - Contraindications
        - Special considerations
    - Aspirin:
        - Classification
        - Mechanisms of action
        - Indications
        - Pharmacokinetics
        - Side/adverse effects
        - How supplied/Dosages
        - Contraindications
        - Special considerations
    - Albuterol administered by inhalation:
        - Classification
        - Mechanisms of action
        - Indications
        - Pharmacokinetics
        - Side/adverse effects
        - How supplied/Dosages
        - Contraindications
        - Special considerations
    - Dextrose 50% and 25%:
        - Classification
        - Mechanisms of action
        - Indications

        - Pharmacokinetics
        - Side/adverse effects
        - How supplied/Dosages
        - Contraindications
        - Special considerations
    - Nitroglycerin administered sublingually and/or spray:
        - Classification
        - Mechanisms of action
        - Indications
        - Pharmacokinetics
        - Side/adverse effects
        - How supplied/Dosages
        - Contraindications
        - Special considerations
    - Naloxone:
        - Classification
        - Mechanisms of action
        - Indications
        - Pharmacokinetics
        - Side/adverse effects
        - How supplied/Dosages
        - Contraindications
        - Special considerations
8. Discuss obtaining a history by identifying classifications of drugs pertinent to ILS medications. (C-1)
9. Discuss identifying the pathophysiology of a patient's condition by identifying classifications of drugs pertinent to ILS medications. (C-1)
10. Discuss considerations for administering a drug when combined with a drug the patient may have taken. (C-1)
11. Review the specific anatomy and physiology pertinent to medication administration. (C-1)
12. Review pharmacology. (C-1)
13. Define specific terminology of medication administration. (C-1)
14. Define specific abbreviations of medication administration. (C-1)
15. Discuss applying basic principles of mathematics, to the calculation of problems associated with medication dosages, pertinent to ILS Technicians. (C-1)
16. Discuss legal aspects affecting medication administration. (C-1)
17. Describe on-line medical direction/control for medication administration. (C-1)
18. Describe off-line medical direction/control for medication administration. (C-1)
19. Discuss the "six rights" of drug administration and correlate these with the principles of medication administration. (C-1)
20. Discuss medical asepsis. (C-1)

21. Describe universal precautions and body substance isolation (BSI) procedures when administering a medication. (C-1)
22. Differentiate among the different parenteral administration routes for medication, which the EMT-Intermediate may administer according to Washington Administrative code and local MPD protocol. (C-3)
23. Differentiate among the different dosage forms in administering parenteral medications, which the EMT-Intermediate may administer according to Washington Administrative code and local MPD protocol. (C-3)
24. Identify anatomic landmarks utilized in administering parenteral medications, which the EMT-Intermediate may administer according to Washington Administrative code and local MPD protocol. (C-1)
25. Describe the equipment needed, techniques utilized, complications, and general principles for the preparation and administration of parenteral medications, which the EMT-Intermediate may administer according to Washington Administrative code and local MPD protocol. (C-1)
26. Differentiate among the different percutaneous administration routes for medication, which the EMT-Intermediate may administer according to Washington administrative code and local MPD protocol. (C-3)
27. Differentiate among the different dosage forms in administering percutaneous medications, which the EMT-Intermediate may administer according to Washington Administrative code and local MPD protocol. (C-3)
28. Identify anatomic landmarks utilized in administering percutaneous medications, which the EMT-Intermediate may administer according to Washington Administrative code and local MPD protocol. (C-1)
29. Describe the equipment needed, techniques utilized, complications, and general principles for the preparation and administration of percutaneous medications, which the EMT-Intermediate may administer according to Washington Administrative code and local MPD protocol. (C-1)
30. Describe disposal of contaminated items and sharps. (C-1)

## Lesson 3-2**: Cardiology**

### LESSON TERMINAL INSTRUCTIONAL OBJECTIVE

At the end of this lesson, the EMT-Intermediate student will be able to utilize the assessment findings to formulate a field impression and implement the management plan for the patient experiencing a cardiac emergency.

### COGNITIVE OBJECTIVES

At the completion to this lesson, the EMT-Intermediate student will be able to:

1. Review the position of the heart within the thoracic cavity (C-1)
2. Describe each of four cardiac chambers (C-1)
3. Review the major structures of the vascular system (C-1)
4. Define cardiac output (C-1)
5. Identify and describe how the heart's pacemaking control, rate, and rhythm are determined (C-2)
6. Identify and describe the components of the focused history as it relates to the patient with cardiovascular compromise (C-1)
7. Describe the components of the OPQRST of chest pain assessment (C-1)

8. Describe the epidemiology, morbidity and mortality of Chest Pain, (C-1)
9. Identify the pathophysiology of Chest Pain (C-1)
10. List and describe the assessment parameters to be evaluated in a patient with Chest Pain (C-1)
11. Describe the significant elements of the focused history in a patient with suspected Chest Pain (C-1, C-2)
12. Identify what is meant by the OPQRST of chest pain assessment (C-1, C-3)
13. List other clinical conditions that may mimic signs and symptoms of coronary artery disease and Chest Pain (C-1)
14. Differentiate the characteristics of the pain/discomfort occurring in angina pectoris and acute myocardial infarction. (C-2)
15. Identify the responsibilities associated with management of patient with Chest Pain (C-2)
16. Based on the pathophysiology and clinical evaluation of the patient with chest pain, list the anticipated clinical problems according to their life-threatening potential (C-2, C-3)
17. Describe the ILS and ILS/Airway medications ($0_2$, nitro, aspirin) used in the management of chest pain and when ALS should be contacted for additional resources.(C-1, C-3)
18. Define the principle causes and terminology associated with heart failure (C-1)
19. Identify the factors that may precipitate or aggravate heart failure (C-1, C-3)
20. Describe the physiological effects of heart failure (C-2)
21. Define the term "acute pulmonary edema" and describe its relationship to left ventricular failure (C-1, C-3)
22. List the interventions prescribed for the patient in acute congestive heart failure (C-1, C-2)
23. Define the term "cardiac tamponade" (C-1)
24. List the mechanisms by which cardiac tamponade may be produced by traumatic and non-traumatic events. (C-1, C-2)
25. Identify the EMT-Intermediate responsibilities associated with management of a patient with cardiac tamponade in conjunction with Advanced life support and air ambulance transport (C-2)
26. Describe the incidence, morbidity and mortality of hypertensive crisis (C-1)
27. Define the term "hypertensive crisis" (C-1)
28. Identify the characteristics of patient population at risk for developing hypertensive crisis (C-1)
29. Identify the progressive vascular changes associate with sustained hypertension(C-1)
30. Describe the clinical features of the patient in hypertensive crisis (C-2, C-3)
31. Rank the clinical problems of patients in hypertensive crisis according to their sense of urgency (C-3)
32. From the priority of clinical problems identified, state the management responsibilities for the patient with hypertensive crisis (C-2)
33. Correlate abnormal findings with clinical interpretation of the patient with hypertensive crisis (C-2, C-3)
34. List the interventions prescribed for the patient in cardiogenic shock (C-1, C-2)
35. Describe the pathophysiology of vascular disorders (C-1)
36. List the traumatic and non-traumatic causes of vascular disorders (C-1)

37. Define the terms "aneurysm" (C-1)
38. Identify the peripheral arteries most commonly affected by occlusive disease (C-1)
39. Identify the major factors involved in the pathophysiology of aortic aneurysm (C-1)
40. Recognize the usual order of signs and symptoms that develop following peripheral artery occlusion (C-2, C-3)
41. Describe the clinical significance of unequal arterial blood pressure readings in the arms (C-3)
42. Recognize and describe the signs and symptoms of dissecting thoracic or abdominal aneurysm (C-2, C-3)
43. Describe the significant elements of the patient history in a patient with vascular disease (C-1, C-2)
44. Identify the hemodynamic effects of vascular disorders (C-1)
45. Identify the complications of vascular disorders (C-1)
46. Identify the responsibilities associated with management of patient with vascular disorders (C-2)

## Lesson 3-3: **Medical**

### LESSON TERMINAL INSTRUCTIONAL OBJECTIVE

At the end of this lesson, the EMT-Intermediate student will be able to utilize the assessment findings to formulate a field impression and implement the treatment plan for the patient with respiratory, neurological, endocrine, anaphylactic or toxicological emergencies.

### COGNITIVE OBJECTIVES

Upon completing this module, the EMT-Intermediate will be able to:

1. Review the function of the structures located in the upper and lower airway. (C-1)
2. Review the physiology of ventilation and respiration. (C-1)
3. Review common pathological events that effect the pulmonary system. (C-1)
4. Review abnormal assessment findings associated with pulmonary diseases and conditions. (C-1)
5. Review various airway and ventilation techniques used in the management of pulmonary diseases. (C-1)
6. Review the pharmacological preparations that EMT-Intermediates use for management of respiratory diseases and conditions. (C-1)
7. Review the use of equipment used during the physical examination of patients with complaints associated with respiratory diseases and conditions. (C-1)
8. Identify the epidemiology, anatomy, physiology, assessment findings, and management for the following respiratory diseases and conditions: (C-1)
    - COPD
        - Bronchial Asthma
        - Chronic Bronchitis
        - Emphysema
    - Pneumonia
    - Non Cardiogenic Pulmonary Edema

- Pulmonary Thromboembolism
- Upper Respiratory Infections
- Epiglottitis
- Hyperventilation Syndrome
- Spontaneous pneumothorax

**The following underlined material is for ILS/Airway (receiving training and certification in both ILS and Airway Technician) ONLY**

9. Discuss the pathophysiology lung injuries **- NOTE: Instruction in the performance of chest decompression is limited to ILS/Airway Technicians (receiving training and certification in both ILS and Airway Technician) ONLY**. (C-1)
    - Tension pneumothorax
    - Simple pneumothorax
    - Open pneumothorax
    - Hemothorax
    - Hemopneumothorax
    - Pulmonary contusion
10. Discuss the assessment findings associated with lung injuries. . (C-1)
11. Discuss the management of lung injuries. . (C-1)
12. Identify the need for rapid intervention and transport of the patient with lung injuries. (C-1)
13. Discuss the pathophysiology of non-traumatic neurologic emergencies. (C-1)
14. Discuss the assessment findings associated with non-traumatic neurologic emergencies. (C-1)
15. Identify the need for rapid intervention and the transport of the patient with non-traumatic emergencies. (C-1)
16. Discuss the management of non-traumatic emergencies. (C-1)
17. Discuss the pathophysiology of coma and altered mental status. (C-1)
18. Discuss the assessment findings associated with coma and altered mental status. (C-1)
19. Discuss the management/treatment plan of coma and altered mental status. (C-1)
20. Describe the ILS and ILS/Airway medications (Naloxone, Dextrose, oral glucose) used in the management of coma and altered mental status and when ALS should be contacted. (C-1)
21. Define coma. (C-1)
22. Define altered mental status. (C-1)
23. Discuss the pathophysiology of syncope. (C-1)
24. Discuss the assessment findings associated with syncope. (C-1)
25. Discuss the management/treatment plan of syncope. (C-1)
26. Discuss the pathophysiology of seizures. (C-1)
27. Discuss the assessment findings associated with seizures. (C-1)
28. Discuss the management/treatment plan of a patient presenting with seizures (C-1)
29. Discuss the pathophysiology of CVA. (C-1)
30. Describe the types of CVA (C-1)
31. Discuss the assessment findings associated with CVA. (C-1)
32. Discuss the management/treatment plan of CVA. (C-1)
33. Discuss the pathophysiology of transient ischemic attack (C-1)

34. Discuss the assessment findings associated with transient ischemic attack (C-1)
35. Discuss the management/treatment plan of transient ischemic attack (C-1)
36. Identify the assessment findings of a patient with a diabetic emergency.
37. Discuss the management of diabetic emergencies.
38. Identify the assessment findings of a hypoglycemia patient(C-1)
39. Recognize the signs and symptoms of the patient with hypoglycemia. (C-1)
40. Describe the management of a responsive hypoglycemia patient. (C-1)
41. Describe the management of an unresponsive hypoglycemia patient. (C-1)
42. Correlate abnormal findings in assessment with clinical significance in the patient with hypoglycemia. (C-2, C-3)
43. Describe the ILS and ILS/Airway medications (Naloxone, Dextrose, oral glucose) used in the management of hypoglycemia and when ALS should be contacted. (C-1)
44. Identify the assessment findings of a hyperglycemic patient. C-1)
45. Recognize the signs and symptoms of the patient with hyperglycemia. C-1)
46. Describe the management of hyperglycemia. C-1)
47. Define allergic reaction. (C-1)
48. Define anaphylaxis. (C-1)
49. Discuss the anatomy and physiology of the organs and structures related to anaphylaxis. (C-1)
50. Discuss the pathophysiology of allergy and anaphylaxis. (C-1)
51. Describe the common methods of entry of substances into the body. (C-1)
52. Define natural and acquired immunity. (C-1)
53. Define antigens and antibodies. (C-1)
54. List common antigens most frequently associated with anaphylaxis. (C-1)
55. Discuss the formation of antibodies in the body. (C-1)
56. Describe physical manifestations in anaphylaxis. (C-1)
57. Differentiate manifestations of an allergic reaction from anaphylaxis. (C-3)
58. Recognize the signs and symptoms related to anaphylaxis. (C-1)
59. Differentiate among the various treatment and pharmacological interventions used in the management of anaphylaxis. (C-3)
60. Describe the ILS and ILS/Airway medications (epinephrine 1:1000 by a commercially pre-loaded measured dose device) used in the management of anaphylaxis and when ALS should be contacted. (C-1)
61. Recognize and differentiate between adult and pediatric doses of epinephrine 1:1000, for the management of anaphylaxis(mg/kg), when using a commercially pre-loaded measured dose device. (C-1)
62. Review the incidence, morbidity and mortality of toxic emergencies. (C-1)
63. Review the risk factors most predisposing to toxic emergencies. (C-1)
64. Review the anatomy and physiology of the organs and structures related to toxic emergencies. (C-1)
65. Review the routes of entry of toxic substances into the body. (C-1)
66. Review the role of the Poison Control Center in the United States and in Washington State. (C-1)
67. Review the toxic substances that are specific to regions. (C-1)

68. Discuss the incidence of drug abuse in the United States. (C-1)
69. Define the following terms: (C-1)
    - Substance or drug abuse
    - Substance or drug dependence
    - Tolerance
    - Withdrawal
    - Addiction
70. Review the pathophysiology of the entry of toxic substances into the body. (C-1)
71. Review the assessment findings associated with toxic substances. (C-1)
72. Review the need for rapid intervention and the transport of the patient with a toxic substance emergency. (C-1)
73. Review the management of toxic substances. (C-1)
74. Review poisoning by ingestion. (C-1)
75. Review the most common poisoning by ingestion. (C-1)
76. Review the signs and symptoms related to the most common poisoning by ingestion. (C-1)
77. Review the abnormal findings in assessment with the clinical significance in the patient with the most common poisoning by ingestion. (C-1)
78. Review among the various treatments and pharmacological interventions in the management of the most common poisoning by ingestion. (C-1)
79. Review the factors affecting the decision to induce vomiting in a patient with ingested poison. (C-1)
80. Apply the assessment findings to formulate a field impression and implement a treatment plan for the patient with the most common poisoning by ingestion. (C-2)
81. Review poisoning by inhalation. (C-1)
82. Review the most commonly poisoning by inhalation. (C-1)
83. Review the signs and symptoms related to the most common poisoning by inhalation. (C-1)
84. Review the abnormal findings in assessment with the clinical significance in the patient with the most common poisoning by inhalation. (C-1)
85. Review the various treatments and pharmacological interventions in the management of the most common poisoning by inhalation. (C-1)
86. Apply the assessment findings to formulate a field impression and implement a treatment plan for the patient with the most common poisoning by inhalation. (C-2)
87. Review poisoning by injection. (C-1)
88. Review the most commonly poisoning by injection. (C-1)
89. Review the signs and symptoms related to the most common poisoning by injection. (C-1)
90. Review the abnormal findings in assessment with the clinical significance in the patient with the most common poisoning by injection. (C-1)
91. Review the various treatments and pharmacological interventions in the management of the most common poisoning by injection. (C-1)
92. Apply the assessment findings to formulate a field impression and implement a treatment plan for the patient with the most common poisoning by injection. (C-2)
93. Review poisoning by surface absorption. (C-1)
94. Review the most commonly poisoning by surface absorption. (C-1)

95. Review the signs and symptoms related to the most common poisoning by surface absorption. (C-1)
96. Review the abnormal findings in assessment with the clinical significance in the patient with the most common poisoning by surface absorption. (C-1)
97. Review the various treatments and pharmacological interventions in the management of the most common poisoning by surface absorption. (C-1)
98. Apply the assessment findings to formulate a field impression and implement a treatment plan for the patient with the most common poisoning by surface absorption. (C-2)
99. List the most commonly abused drugs (by both chemical name and street names). (C-1)
100. Recognize the signs and symptoms related to the most common drug abuse. (C-1)
101. Correlate the abnormal findings in assessment with the clinical significance in the patient with the most common drug abuse. (C-3)
102. Differentiate among the various treatments and pharmacological interventions in the management of the most common drug abuse. (C-3)
103. Apply the assessment findings to formulate a field impression and implement a treatment plan for the patient with the most common drug abuse. (C-2)

## Section 4 - **Special Considerations**

## Lesson 4-1: **Pediatrics**

LESSON TERMINAL INSTRUCTIONAL OBJECTIVE.

At the end of this lesson, the EMT-Intermediate student will be able to utilize the assessment findings to formulate a field impression and implement the treatment plan for the pediatric emergency patient.

**COGNITIVE OBJECTIVES**

1. Identify the growth and development characteristics of infants and children. (C-1)
2. Identify anatomy and physiology characteristics of infants and children. (C-1)
3. Describe techniques for successful evaluation of infants and children. (C-1)
4. Describe techniques for successful treatment of infants and children. (C-1)
5. Identify the common responses of families to acute illness and injury of an infant or child. (C-1)
6. Describe techniques for successful interaction with families of acutely ill or injured infants and children. (C-1)
7. Describe how infant and child anatomical and physiological features affect patient management. (C-1)
8. Discuss pediatric patient assessment. (C-1) **PLEASE REFERENCE THE PEDIATRIC ASSESSMENT INFORMATION PROVIDED AT THE END OF THIS LESSON.**
9. Determine appropriate airway adjuncts for infants and children. (C-1)
10. Discuss complications of improper utilization of airway adjuncts with infants and children. (C-1)
11. Discuss appropriate ventilation devices for infants and children. (C-1)
12. Discuss complications of improper utilization of ventilation devices with infants and children. (C-1)
13. Define respiratory distress. (C-1)
14. Define respiratory failure. (C-1)
15. Differentiate between upper and lower airway obstruction. (C-3)

16. Discuss the common causes of hypoperfusion in infants and children. (C-1)
17. Evaluate the severity of hypoperfusion in infants and children. (C-1)
18. Describe the primary etiologies of altered level of consciousness in infants and children. (C-1)
19. Discuss the primary etiologies of cardiopulmonary arrest in infants and children. (C-1)
20. Discuss age appropriate vascular access sites for infants and children. (C-1)
21. Discuss the appropriate equipment for vascular access in infants and children. (C-1)
22. Identify complications of vascular access for infants and children. (C-1)
23. Discuss anatomical features of children that predispose or protect them from certain injuries. (C-1)
24. Discuss fluid management and shock treatment for infant and child trauma patient. (C-1)
25. Describe why critical incident stress debriefing plays a vital role for EMT-Intermediate's. (C-1)
26. Discuss the pathophysiology of respiratory distress/failure in infants and children(C-1)
27. Discuss the assessment findings associated with respiratory distress/failure in infants and children. (C-1)
28. Discuss the management/treatment plan for respiratory distress/failure in infants and children. (C-1)
29. Discuss the pathophysiology of hypoperfusion in infants and children. (C-1)
30. Discuss the assessment findings associated with hypoperfusion in infants and children. (C-1)
31. Discuss the management/treatment plan for hypoperfusion in infants and children. (C-1)
32. Discuss the assessment findings associated with seizures in infants and children(C-1)
33. Discuss the management/treatment plan for seizures in infants and children. (C-1)
34. Discuss the assessment findings associated with hypoglycemia in infants and children. (C-1)
35. Discuss the management/treatment plan for hypoglycemia in infants and children. (C-1)
36. Define allergic reaction. (C-1)
37. Define anaphylaxis. (C-1)
38. Discuss the anatomy and physiology of the organs and structures related to anaphylaxis. (C-1)
39. Discuss the pathophysiology of allergy and anaphylaxis. (C-1)
40. Describe the common methods of entry of substances into the body. (C-1)
41. Define natural and acquired immunity. (C-1)
42. Define antigens and antibodies. (C-1)
43. List common antigens most frequently associated with anaphylaxis. (C-1)
44. Discuss the formation of antibodies in the body. (C-1)
45. Describe physical manifestations in anaphylaxis. (C-1)
46. Differentiate manifestations of an allergic reaction from anaphylaxis. (C-3)
47. Recognize the signs and symptoms related to anaphylaxis. (C-1)
48. Differentiate among the various treatment and pharmacological interventions used in the management of anaphylaxis. (C-3)

49. Describe the ILS and ILS/Airway medications (epinephrine 1:1000 by a commercially pre-loaded measured dose device) used in the management of anaphylaxis and when ALS should be contacted. (C-1)
50. Recognize and differentiate between adult and pediatric doses of epinephrine 1:1000, for the management of anaphylaxis(mg/kg), when using a commercially pre-loaded measured dose device. (C-1)
51. Discuss the assessment findings associated with head injury in infants and children. (C-1)
52. Discuss the management/treatment plan for head injury in infants and children. (C-1)
53. Discuss the pathophysiology of burns in infants and children. (C-1)
54. Discuss the assessment findings associated with burns in infants and children. (C-1)
55. Discuss the management/treatment plan for burns in infants and children. (C-1)
56. Describe the epidemiology, including the incident, morbidity/mortality, risk factors and prevention strategies for abuse and neglect in infants and children. (C-1)
57. Discuss the pathophysiology of abuse and neglect in infants and children. (C-1)
58. Discuss the assessment findings associated with abuse and neglect in infants and children. (C-1)
59. Discuss the management/treatment plan for abuse and neglect in infants and children. (C-1)
60. Discuss the assessment findings associated with SIDS infants. (C-1)
61. Discuss the management/treatment plan for SIDS in infants. (C-1)

## Lesson 4-2: **Geriatrics**

### LESSON TERMINAL INSTRUCTIONAL OBJECTIVE

At the completion of this lesson, the EMT-Intermediate student will be able to utilize the assessment findings to formulate and implement the treatment plan for the geriatric patient.

### COGNITIVE OBJECTIVES

### GENERAL

1. Discuss population demographics demonstrating the rise in elderly population in the U.S. (C-1)
2. Discuss society's view of aging and the social, financial, and ethical issues facing the elderly. (C-1)
3. Describe the various living environments of elderly patient. (C-1)
4. Assess the local resources available to assist the elderly and create strategies to refer at risk patients to appropriate community services. (C-3)
5. Discuss issues facing society concerning the elderly. (C-1)
6. Describe local community resources available for referral to the elderly. (C-1)
7. Discuss the expected anatomical and physiological changes as well as common pathology that accompany the aging process to include the following systems: (C-1)
    - Skin
    - Sensory
    - Cardiovascular
    - Respiratory
    - Gastrointestinal
    - Renal

- Musculoskeletal
- Urological
- Immunologic

8. Discuss common emotional and psychological reactions to aging to include causes and manifestations. (C-1)

**GENERAL PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Geriatrics**

9. Apply the pathophysiology of multi-system failure to the assessment and management of medical conditions in the elderly patient. (C-1)
10. Compare the pharmacokinetics of an elderly patient to that of a young adult. (C-2)
11. Discuss the problems with mobility in the elderly. (C-1)
12. Discuss the implications of problems with sensation, communication and patient assessment. (C-2)
13. Discuss the problems with continence and elimination and develop communication strategies to provide psychological support. (C-3)
14. Discuss factors that may complicate the assessment of the elderly patient. (C-1)
15. Describe principles that should be employed when assessing and communicating with the elderly. (C-1)
16. Compare the assessment of a young patient with that of an elderly patient. (C-3)
17. Discuss common complaints of elderly patients. (C-1)
18. Discuss the impact of polypharmacy and medication non-compliance on patient assessment and management. (C-1)
19. Discuss drug distribution, metabolism, and excretion in the elderly patient. (C-3)
20. Discuss medication issues of the elderly including polypharmacy, dosing errors and increased drug sensitivity. (C-1)
21. Discuss the use and effects of commonly prescribed drugs for the elderly patient.

**PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT -Pulmonology**

22. Discuss the normal and abnormal changes with age of the pulmonary system. (C-1)
23. Discuss the assessment of the elderly patient with pulmonary complaints related to the pulmonary complaints. (C-1)
24. Identify the need for intervention and transport of the elderly pulmonary patient. (C-1)
25. Develop and execute a treatment plan and management of the elderly pulmonary patient. (C-3)

**PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT -Pneumonia**

26. Compare and contrast the pathophysiology of pneumonia in the elderly with that of a younger adult. (C-3)
27. Discuss the assessment findings common in elderly patients with pneumonia. (C-1)
28. Discuss the management considerations when treating an elderly patient with pneumonia. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Chronic Obstructive Pulmonary Diseases**

29. Compare and contrast the pathophysiology of chronic obstructive pulmonary diseases in the elderly with that of a younger adult. (C-1)
30. Discuss the assessment findings common in elderly patients with chronic obstructive pulmonary diseases. (C-1)

31. Discuss the management/ considerations when treating an elderly patient with chronic obstructive pulmonary diseases. (C-1, C-3)

**PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT -Cardiology**

32. Discuss the normal and abnormal changes with age of the cardiovascular system. (C-1)
33. Discuss the assessment of the elderly patient with complaints related to the cardiovascular system. (C-1)
34. Identify the need for intervention and transport of the elderly patient with cardiovascular complaints. (C-1)
35. Develop and execute a treatment plan and management of the elderly patient with cardiovascular complaints. (C-2, C-3)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Myocardial infarction**

36. Compare and contrast the pathophysiology of myocardial infarction in the elderly with that of a younger adult. (C-3)
37. Discuss the assessment findings common in elderly patients with myocardial infarction. (C-1)
38. Discuss the management/ considerations when treating an elderly patient with myocardial infarction. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Heart failure**

39. Compare and contrast the pathophysiology of heart failure in the elderly with that of a younger adult. (C-3)
40. Discuss the assessment findings common in elderly patients with heart failure. (C-1)
41. Discuss the management/ considerations when treating an elderly patient with heart failure. (C-1)

**PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT -Aneurysms**

42. Compare and contrast the pathophysiology of aneurysms in the elderly with that of a younger adult. (C-3)
43. Discuss the assessment findings common in elderly patients with aneurysms. (C-1)
44. Discuss the management/ considerations when treating an elderly patient with aneurysms. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Hypertension**

45. Compare and contrast the pathophysiology of hypertension in the elderly with that of a younger adult. (C-3)
46. Discuss the assessment findings common in elderly patients with hypertension. (C-1)
47. Discuss the management/ considerations when treating an elderly patient with hypertension. (C-1)

**PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT -Neurology**

48. Discuss the normal and abnormal changes with age of the nervous system. (C-1)
49. Discuss the assessment of the elderly patient with complaints related to the nervous system. (C-1)
50. Identify the need for intervention and transport of the patient with complaint related to the nervous system. (C-1, C-2)
51. Develop and execute a treatment plan and management of the elderly patient with complaints related to the nervous system. (C-2)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT -Delirium**

52. Compare and contrast the pathophysiology of delirium in the elderly with that of a younger adult. (C-3)
53. Discuss the assessment findings common in elderly patients with delirium. (C-1)
54. Discuss the management/ considerations when treating an elderly patient with delirium. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT -Altered Level of Consciousness**

55. Compare and contrast the pathophysiology of states of altered levels of consciousness in the elderly with that of a younger adult. (C-3)
56. Discuss the assessment findings common in elderly patients with altered levels of consciousness. (C-1)
57. Discuss the management/ considerations when treating an elderly patient with altered levels of consciousness. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Alzheimer Diseases**

58. Compare and contrast the pathophysiology of Alzheimer disease in the elderly with that of a younger adult.
59. Discuss the assessment findings common in elderly patients with Alzheimer disease.
60. Discuss the management/ considerations when treating an elderly patient with Alzheimer disease.

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Parkinson Disease**

61. Compare and contrast the pathophysiology of Parkinson disease in the elderly with that of a younger adult. (C-3)
62. Discuss the assessment findings common in elderly patients with Parkinson disease. (C-1)
63. Discuss the management/ considerations when treating an elderly patient with Parkinson disease. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Hypoglycemia**

64. Compare and contrast the pathophysiology of hypoglycemia in the elderly with that of a younger adult. (C-3)
65. Discuss the assessment findings common in elderly patients with hypoglycemia. (C-1)
66. Discuss the management/ considerations when treating an elderly patient with hypoglycemia. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Hypothermia**

67. Compare and contrast the pathophysiology of Hypothermia in the elderly with that of a younger adult. (C-3)
68. Discuss the assessment findings common in elderly patients with Hypothermia. (C-1)
69. Discuss the management/ considerations when treating an elderly patient with Hypothermia. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Stroke, CVA, TIA**

70. Compare and contrast the pathophysiology of a stroke, CVA, TIA in the elderly with that of a younger adult. (C-3)
71. Discuss the assessment findings common in elderly patients with a stroke, CVA, TIA. (C-1)

72. Discuss the management/ considerations when treating an elderly patient with a stoke, CVA, TIA. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Dementia**

73. Compare and contrast the pathophysiology of Dementia in the elderly with that of a younger adult. (C-3)
74. Discuss the assessment findings common in elderly patients with Dementia. (C-1)
75. Discuss the management/ considerations when treating an elderly patient with Dementia. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Intracranial Hemorrhage**

76. Compare and contrast the pathophysiology of intracranial hemorrhage in the elderly with that of a younger adult. (C-2, C-3)
77. Discuss the assessment findings common in elderly patients with intracranial hemorrhage. (C-1)
78. Discuss the management/ considerations when treating an elderly patient with intracranial hemorrhage. (C-1)

**PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT -Endocrinology**

79. Discuss the normal and abnormal changes with age of the endocrine system. (C-1)
80. Discuss the assessment of the elderly patient with complaints related to the endocrine system. (C-1)
81. Identify the need for intervention and transport of the patient with endocrine problems. (C-1, C-2)
82. Develop and execute a treatment plan and management of the elderly patient with endocrine problems. (C-2, C-3)

**PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT -Diabetes**

83. Compare and contrast the pathophysiology of diabetes in the elderly with that of a younger adult. (C-2, C-3)
84. Discuss the assessment findings common in elderly patients with diabetes. (C-1)
85. Discuss the management/ considerations when treating an elderly patient with diabetes. (C-1)

**PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT -Gastroenterology**

86. Discuss the normal and abnormal changes with age of the gastrointestinal system. (C-1)
87. Discuss the assessment of the elderly patient with complaints related to the gastrointestinal system. (C-1)
88. Identify the need for intervention and transport of the patient with gastrointestinal complaints. (C-1, C-2)
89. Develop and execute a treatment plan and management of the elderly patient with gastrointestinal problems. (C-2, C-3)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - GI Hemorrhage**

90. Compare and contrast the pathophysiology of GI hemorrhage in the elderly with that of a younger adult. (C-2, C-3)
91. Discuss the assessment findings common in elderly patients with GI hemorrhage. (C-1)
92. Discuss the management/ considerations when treating an elderly patient with GI hemorrhage. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Bowel Obstruction**

93. Compare and contrast the pathophysiology of bowel obstruction in the elderly with that of a younger adult. (C-3)
94. Discuss the assessment findings common in elderly patients with bowel obstruction. (C-1)
95. Discuss the management/ considerations when treating an elderly patient with bowel obstruction. (C-1)

**PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT -Toxicology**

96. Discuss the normal and abnormal changes with age of the toxicology. (C-1)
97. Discuss the assessment of the elderly patient with complaints related to toxicology. (C-1)
98. Identify the need for intervention and transport of the patient with toxicological problems. (C-1, C-2)
99. Develop and execute a treatment plan and management of the elderly patient with toxicological problems. (C-2, C-3)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Drug toxicity**

100. Compare and contrast the pathophysiology of drug toxicity in the elderly with that of a younger adult. (C-2, C-3)
101. Discuss the assessment findings common in elderly patients with drug toxicity. (C-1)
102. Discuss the management/ considerations when treating an elderly patient with drug toxicity. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Drug and alcohol abuse**

103. Compare and contrast the pathophysiology of drug and alcohol abuse in the elderly with that of a younger adult. (C-2, C-3)
104. Discuss the assessment findings common in elderly patients with drug and alcohol abuse. (C-1)
105. Discuss the management/ considerations when treating an elderly patient with drug and alcohol abuse. (C-1)

**PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Environmental Consideration**

106. Discuss the normal and abnormal changes with age of the thermoregulation. (C-1)
107. Discuss the assessment of the elderly patient with complaints related to thermoregulation. (C-1)
108. Identify the need for intervention and transport of the patient with environmental considerations. (C-1, C-2)
109. Develop and execute a treatment plan and management of the elderly patient with environmental considerations. (C-2, C-3)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Hypothermia**

110. Compare and contrast the pathophysiology of hypothermia in the elderly with that of a younger adult. (C-2, C-3)
111. Discuss the assessment findings common in elderly patients with hypothermia. (C-1)
112. Discuss the management/ considerations when treating an elderly patient with hypothermia. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Hyperthermia**

113. Compare and contrast the pathophysiology of hyperthermia in the elderly with that of a younger adult. (C-2, C-3)
114. Discuss the assessment findings common in elderly patients with hyperthermia. (C-1)

115. Discuss the management/ considerations when treating an elderly patient with hyperthermia. (C-1)

**PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Behavioral/ Psychiatric Disorders**

116. Discuss the normal and abnormal psychiatric changes of aging. (C-1)
117. Discuss the assessment of the elderly patient with psychiatric complaints. (C-1)
118. Identify the need for intervention and transport of the psychiatric patient. (C-1, C-2)
119. Develop and execute a treatment plan and management of the elderly psychiatric patient. (C-2, C-3)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT -Depression**

120. Compare and contrast the psychiatry of depression in the elderly with that of a younger adult. (C-2, C-3)
121. Discuss the assessment findings common in depressed elderly patients. (C-1)
122. Discuss the management/ considerations when treating a depressed elderly patient. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT -Suicide**

123. Compare and contrast the psychiatry of suicide in the elderly with that of a younger adult. (C-2, C-3)
124. Discuss the assessment findings common in suicidal elderly patients. (C-1)
125. Discuss the management/ considerations when treating a suicidal elderly patient. (C-1)

**PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT -Musculoskeletal System**

126. Discuss the normal and abnormal changes with age of the musculoskeletal system. (C-1)
127. Discuss the assessment of the elderly patient with complaints related to the musculoskeletal system. (C-1)
128. Identify the need for intervention and transport of the patient with musculoskeletal complaints. (C-1, C-2)
129. Develop and execute a treatment plan and management of the elderly patient with musculoskeletal complaints. (C-2, C-3)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Trauma in the elderly**

130. Compare and contrast the pathophysiology of trauma in the elderly with that of a younger adult. (C-2, C-3)
131. Discuss the assessment findings common in elderly patients with traumatic injuries. (C-1)
132. Discuss the management/ considerations when treating an elderly patient with traumatic injures. (C-1)

**PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT -Trauma in the elderly**

133. Discuss the assessment of the elderly patient with traumatic injures. (C-1)
134. Identify the need for intervention and transport of the elderly patient with trauma. (C-1, C-2)
135. Develop and execute a treatment plan and management of the elderly patient with trauma. (C-2, C-3)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Long bone fractures**

136. Compare and contrast the pathophysiology of long bone fractures in the elderly with that of a younger adult. (C-2, C-3)

137. Discuss the assessment findings common in elderly patients with long bone fractures. (C-1)
138. Discuss the management/ considerations when treating an elderly patient with long bone fractures. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Hip fractures**

139. Compare and contrast the pathophysiology of hip fractures in the elderly with that of a younger adult. (C-2, C-3)
140. Discuss the assessment findings common in elderly patients with hip fractures. (C-1)
141. Discuss the management/ considerations when treating an elderly patient with hip fractures. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Head injuries**

142. Compare and contrast the pathophysiology of Head injuries in the elderly with that of a younger adult. (C-3)
143. Discuss the assessment findings common in elderly patients with Head injuries. (C-1)
144. Discuss the management/ considerations when treating an elderly patient with Head injuries. (C-1)

**SPECIFIC PATHOPHYSIOLOGY, ASSESSMENT AND MANAGEMENT - Burns**

145. Compare and contrast the pathophysiology of Burns in the elderly with that of a younger adult. (C-3)
146. Discuss the assessment findings common in elderly patients with Burns. (C-1)
147. Discuss the management/ considerations when treating an elderly patient with Burns. (C-1)

## NOTES: